

Claim Listing

1. (Previously presented) A method of providing multiple grades of wireless service to multiple field users for communication of data between a base station and multiple subscriber units over one or more CDMA communication channels, each grade of service having a corresponding priority level, the method comprising the steps of:

- reserving a bandwidth and dividing the bandwidth into a plurality of channels;
- maintaining a connection between multiple subscriber units and the base station;
- detecting a request by multiple field units to simultaneously transmit data to the base station;

identifying a priority level of a user requesting allocation of bandwidth for transmitting data information to the base station depending on whether a previous historical usage of resources by the user exceeds a predetermined threshold, such that:

- if the previous historical usage by the user is higher than the threshold, the user is assigned a lower priority level for transmitting data information, the lower priority level entitling the user to use of fewer channels than otherwise allowed when a higher priority level is assigned, and

- if the previous historical usage by the user is lower than the threshold, the user is assigned a higher priority level for transmitting data information, the higher priority level entitling the user use of more channels than otherwise allowed when a lower priority level is assigned; and

assigning the channels for communication between the base station and subscriber units based on the corresponding priority level of requesting field units so identified.

2. (Canceled)

3. (Previously Presented) The method as in claim 1 wherein the identified priority level of the user defines a maximum continuous allocation of resources entitled to the user to transmit data information from a subscriber unit to the base station over multiple assigned traffic channels of the wireless communication system, and the method further comprising:

detecting whether a time limit for previously assigned channels has been exceeded for a continuous transmission of data based on a corresponding priority level of the user and, if so, the method further comprising:

- discontinuing a data transfer by the user;
- deallocating use of previously assigned channels; and
- decreasing the priority level of the subscriber unit to a lower priority level, the lower priority level entitling the user to use of fewer channels than otherwise allowed when a higher priority level is assigned.

4. (Previously presented) A method for providing multiple grades of service in a demand access wireless communication system, comprising:

- identifying a priority level of a user requesting allocation of bandwidth for transmitting data information to a base station depending on whether a previous historical usage of resources by that user exceeds a predetermined threshold, such that:

- if the previous historical usage by the user is higher than the threshold, the user is assigned a lower priority level for transmitting data information, the lower priority level entitling the user to use of fewer channels than otherwise allowed when a higher priority level is assigned, and

- if the previous historical usage by the user is lower than the threshold, the user is assigned a higher priority level for transmitting data information, the higher priority level entitling the user use of more channels than otherwise allowed when a lower priority level is assigned; and

- allocating bandwidth to the user depending upon the corresponding priority level so identified.

5. (Previously Presented) A method as in claim 4, wherein the priority level for transmitting data defines a maximum continuous allocation of resources entitled to the user to transmit data information from a subscriber unit to the base station over multiple assigned traffic channels of the wireless communication system.

6. (Previously Presented) A method as in claim 5 further comprising:
detecting whether a time limit for allocated channels has been exceeded for a continuous transmission of data based on a corresponding priority level of the user and,
if so, the method further comprising:
discontinuing a data transfer by the user;
deallocating use of previously assigned channels; and
decreasing the priority level of the subscriber unit to a lower priority level, the lower priority level entitling the user to use of fewer channels than otherwise allowed when a higher priority level is assigned.
7. (Previously Presented) A method as in claim 4, wherein a user is allocated resources depending on a cumulative amount of data information previously transferred from a subscriber unit to the base station.
8. (Previously Presented) A method as in claim 4, wherein the threshold defines a cumulative amount of data information that a user can transmit over specified period of time without being assigned to a lower priority level.
9. (Previously Presented) A method as in claim 4, wherein the threshold varies over time.
10. (Previously Presented) A method as in claim 4, wherein the previous historical usage of resources is determined by comparing usage over a period of at least several past days.
11. (Previously presented) An apparatus for providing multiple grades of service in a demand access wireless communication system, comprising at a base station:
a processor that identifies a priority level of a user requesting allocation of bandwidth for transmitting data information to the base station depending on whether a previous historical usage of resources by that user exceeds a predetermined threshold, such that:
if the previous historical usage by the user is higher than the threshold, the processor assigning the user a lower priority level for transmitting data information, the

lower priority level entitling the user to use of fewer channels than otherwise allowed when a higher priority level is assigned, and

if the previous historical usage by the user is lower than the threshold, the processor assigning the user a higher priority level for transmitting data information, the higher priority level entitling the user use of more channels than otherwise allowed when a lower priority level is assigned; and

the processor allocating bandwidth to the user depending upon the corresponding priority level so identified.

12. (Previously Presented) The apparatus as in claim 11, wherein the priority level for transmitting data defines a maximum continuous allocation of resources entitled to the user to transmit data information from a subscriber unit to the base station over multiple assigned traffic channels of the wireless communication system.

13. (Previously Presented) The apparatus as in claim 12 wherein:

the processor detects whether a time limit for allocated channels has been exceeded for a continuous transmission of data based on a corresponding priority level of the user and, if so:

the processor discontinues a data transfer by the user;

the processor deallocates use of previously assigned channels; and

the processor decreases the priority level of the subscriber unit to a lower priority level, the lower priority level entitling the user to use of fewer channels than otherwise allowed when a higher priority level is assigned.

14. (Previously Presented) The apparatus as in claim 11, wherein the processor allocates resources to a user depending on a cumulative amount of data information previously transferred from a subscriber unit to the base station.

15. (Previously Presented) The apparatus as in claim 11, wherein the threshold defines a cumulative amount of data information that a user can transmit over specified period of time without being assigned to a lower priority level.

16. (Previously Presented) The apparatus as in claim 11, wherein the threshold varies over time.
17. (Previously Presented) The apparatus as in claim 11, wherein the processor determines the previous historical usage of resources by comparing usage over a period of at least several past days.
18. (Previously presented) An article of manufacture, comprising:
 - a computer-usable medium;
 - a set of computer operating instructions embodied on the medium, including instructions for a method for providing multiple grades of service in a demand access wireless communication system, the instructions comprising:
 - identifying a priority level of a user requesting allocation of bandwidth for transmitting data information to a base station depending on whether a previous historical usage of resources by that user exceeds a predetermined threshold, such that:
 - if the previous historical usage by the user is higher than the threshold, the user is assigned a lower priority level for transmitting data information, the lower priority level entitling the user to use of fewer channels than otherwise allowed when a higher priority level is assigned, and
 - if the previous historical usage by the user is lower than the threshold, the user is assigned a higher priority level for transmitting data information, the higher priority level entitling the user use of more channels than otherwise allowed when a lower priority level is assigned; and
 - allocating bandwidth to the user depending upon the corresponding priority level so identified.
19. (Previously Presented) The article of manufacture of claim 18 wherein the priority level for transmitting data defines a maximum continuous allocation of resources entitled to the user to

transmit data information from a subscriber unit to the base station over multiple assigned traffic channels of the wireless communication system.

20. (Previously Presented) The article of manufacture of claim 19 wherein the instructions further comprise:

detecting whether a time limit for allocated channels has been exceeded for a continuous transmission of data based on a corresponding priority level of the user and,

if so, the instructions further comprising:

discontinuing a data transfer by the user;

deallocating use of previously assigned channels; and

decreasing the priority level of the subscriber unit to a lower priority level, the lower priority level entitling the user to use of fewer channels than otherwise allowed when a higher priority level is assigned.

21. (Previously Presented) The article of manufacture of claim 18 wherein the instructions further comprise allocating resources to a user depending on a cumulative amount of data information previously transferred from a subscriber unit to the base station.

22. (Previously Presented) The article of manufacture of claim 18 wherein the threshold defines a cumulative amount of data information that a user can transmit over specified period of time without being assigned to a lower priority level.

23. (Previously Presented) The article of manufacture of claim 18 wherein the threshold varies over time.

24. (Previously Presented) The article of manufacture of claim 18 wherein the instructions further comprise determining the previous historical usage of resources by comparing usage over a period of at least several past days.